Climate Change Data Dive
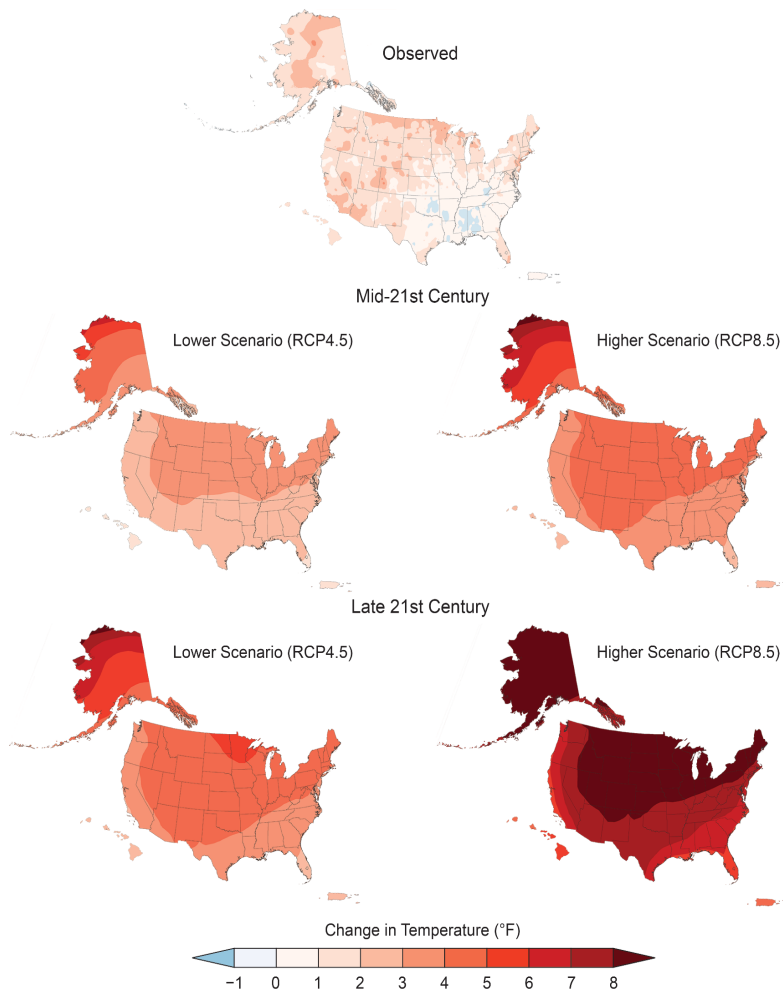
Instructions: As you work through each figure and graph with your group, please complete the questions that align with the data you are looking at. Happy *data diving*!

Changes in Annual Average Temperature
Use the graph titled "Figure 2.4 Observed and Projected Changes in Annual Average Temperature" to answer the following questions.

Observed

1. An anomaly is an outcome that is different from what is normal or expected. How have the national temperature anomalies changed from 'Observed' to the 'Predicted'?
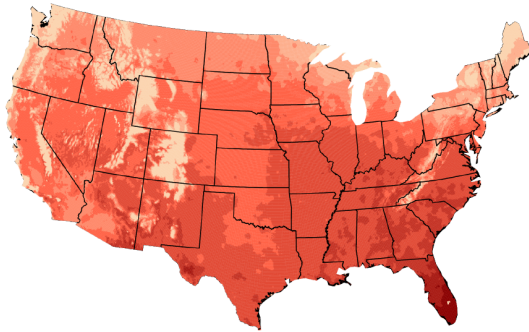
Mid-21st Century

Lower Scenario (RCP4.5)   Higher Scenario (RCP8.5)

2. What is the general trend in national average temperature that these figures are showing?

Late 21st Century

Lower Scenario (RCP4.5)   Higher Scenario (RCP8.5)

Change in Temperature (°F)

−1   0   1   2   3   4   5   6   7   8

3. Are the temperatures in the 'Observed' figure the same? If not, explain the differences in temperatures across the United States. (Hint: How does the northern region compare with the southern? Eastern vs Western? Coast vs inland?)
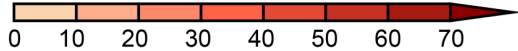
Changes in Temperature Extremes

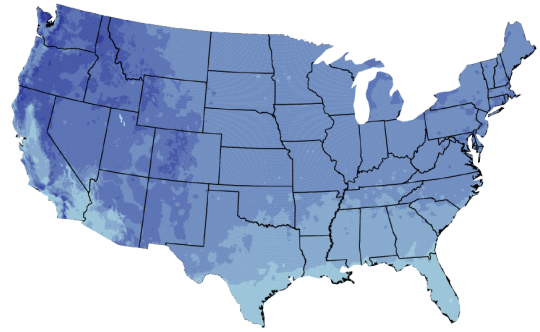*Use the graph titled "Projected Change Tmax/Tmin" to answer the following questions.*

Projected Change in Number of Days Above 90°F
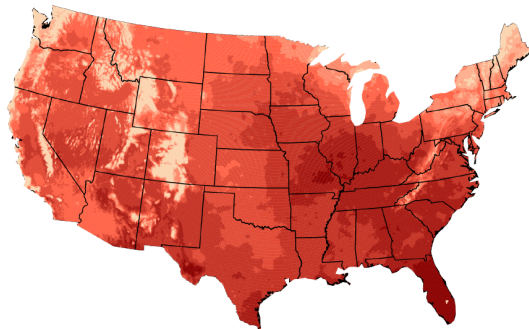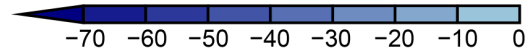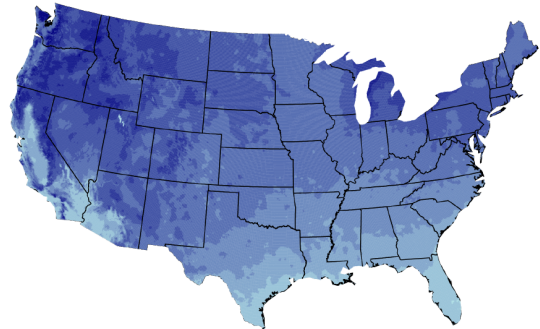Mid 21st Century, Higher Scenario (RCP8.5)

Projected Change in Number of Days Below 32°F
Mid 21st Century, Higher Scenario (RCP8.5)
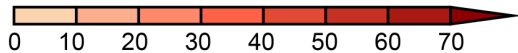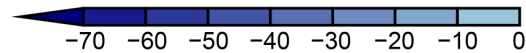

Weighted Multi-Model Mean

Weighted Multi-Model Mean

Mean of Three Warmest Models

Mean of Three Warmest Models

5. What is the general trend in the predicted national temperature extremes that these figures are showing?

6. Name one state that is predicted to experience extremely hot temperatures.

7. Will climate change affect all humans equally?

8. Will the climate change the same way everywhere on the planet? WHY? EXPLAIN USING THE NATIONAL MAP! What are some clues on the map that backup your claim?

Changes in Season Precipitation

Use the graph titled "Figure 2.5 Observed and Projected Change in Seasonal Precipitation" to answer the following questions.
https://nca2018.globalchange.gov/chapter/2#fig-2-5

Observed
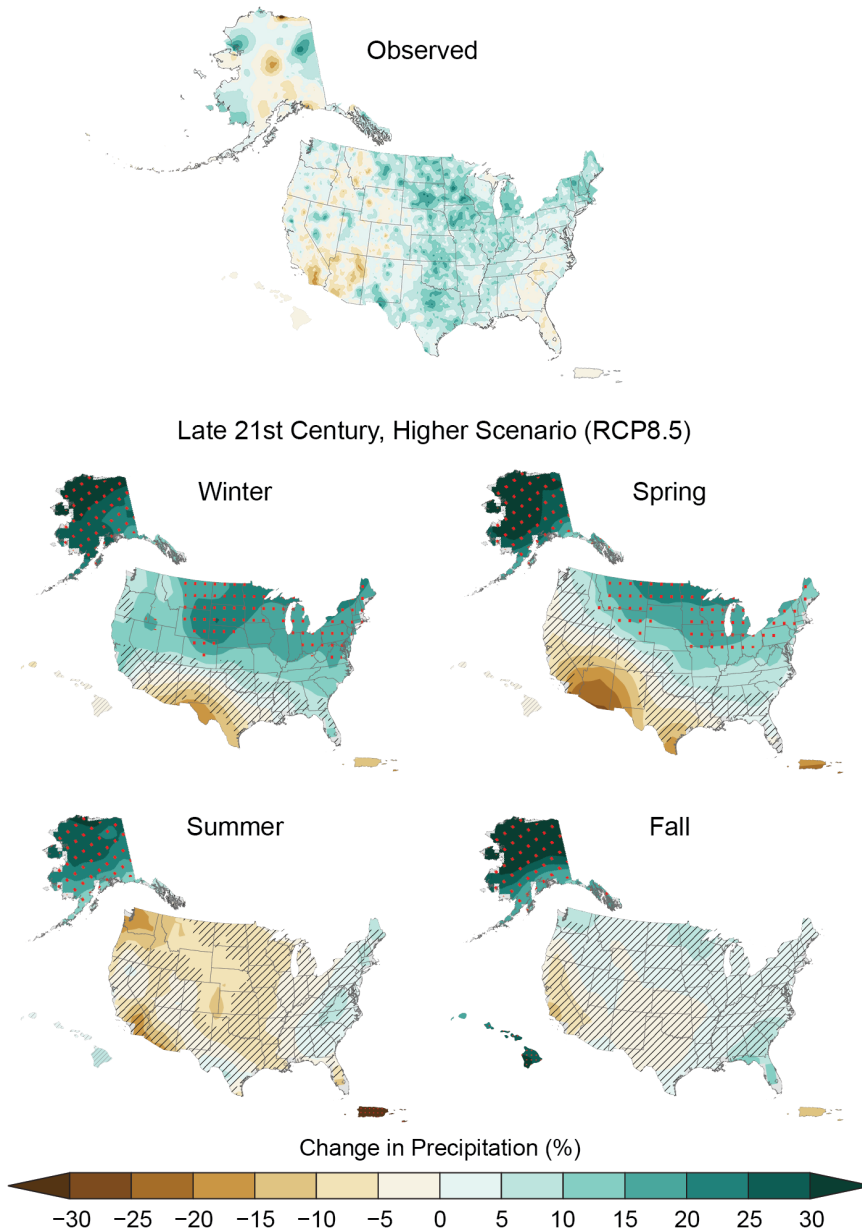
9. How are seasonal precipitation trends projected to change in the Midwest compared to Hawaii?

Late 21st Century, Higher Scenario (RCP8.5)

Winter

Spring

10. Notice that there are four different projected graphs that provide information on precipitation changes. How do they communicate the same trends differently?

Summer

Fall

Change in Precipitation (%)

−30 −25 −20 −15 −10 −5 0 5 10 15 20 25 30

11. In two out of the four seasonal graphs, there are red dots? Make a prediction of what they mean and use the figures as evidence to support your prediction.